Nuclear Fission Research at IRMM

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The Institute for Reference Materials and Measurements (IRMM) will celebrate its 45^{th} anniversary in 2005. With its 150 MeV Geel Electron Linear Accelerator (GELINA) and 7 MV Van de Graaff accelerator, it served the neutron community for this period.

The research in the field of Nuclear Fission was focused in recent years on both the measurement and calculation of fission cross-sections, and the measurement of fission fragment properties.

Fission cross-sections were measured for ^{233}Pa, ^{234,236}U, the fission process was studied for $^{239}\text{Pu}(n,f)$ in resonances, $^{251}\text{Cf}(n_{\text{th}},f)$. These measurements derive their interest from accelerator driven systems, the thorium cycle, high temperature reactors, safety of current reactors and basic physics. The measurements are supported by several modelling efforts that aim at improvement of data evaluation.

Some of the highlights will be presented together with an outlook on future activities.

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